```
=> fil reg capl
COST IN U.S. DOLLARS
                                                  SINCE FILE
                                                                  TOTAL
                                                       ENTRY
                                                                SESSION
FULL ESTIMATED COST
                                                        0.20
                                                                 543.19
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
                                                  SINCE FILE
                                                                  TOTAL
                                                       ENTRY
                                                                SESSION
                                                                  -0.54
CA SUBSCRIBER PRICE
                                                        0.00
FILE 'REGISTRY' ENTERED AT 17:06:27 ON 10 JUL 1999
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FILE 'CAPLUS' ENTERED AT 17:06:27 ON 10 JUL 1999
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=> d que 112
                STR
/ Structure 1 in file .gra /
Structure attributes must be viewed using STN Express query preparation.
L11
             10 SEA FILE=REGISTRY SSS FUL L9
L12
              2 SEA FILE=CAPLUS L11
=> d que 113
                STR
L9
/ Structure 2 in file .gra /
Structure attributes must be viewed using STN Express query preparation.
L11
             10 SEA FILE=REGISTRY SSS FUL L9
L13
              0 SEA FILE=BEILSTEIN L11
=> d l12 ibib iabs hitstr total
L12 ANSWER 1 OF 2 CAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER:
                         1998:604913 CAPLUS
DOCUMENT NUMBER:
                         129:216617
TITLE:
                         Preparation of
amidinophenylethylbenzimidazolylcarboxa
                         mides and related compounds as thrombin inhibitors.
INVENTOR (S):
                         Hauel, Norbert; Ries, Uwe; Priepke, Henning; Wienen,
                         Wolfgang; Stassen, Jean Marie
PATENT ASSIGNEE(S):
                         Boehringer Ingelheim Pharma K.-G., Germany
SOURCE:
                         PCT Int. Appl., 201 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         German
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
```

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PATENT NO.
                      KIND
                            DATE
                                           APPLICATION NO.
                                                            DATE
                            _____
                                           _____
     WO 9837075
                            19980827
                                           WO 98-EP865
                                                            19980216
                      A1
        W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG,
             KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
             NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
             UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,
             FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,
             GA, GN, ML, MR, NE, SN, TD, TG
                                           DE 97-19706229
                                                            19970218
     DE 19706229
                       A1
                            19980820
     AU 9863991
                       A1
                            19980909
                                           AU 98-63991
                                                            19980216
PRIORITY APPLN. INFO.:
                                           DE 97-19706229
                                                            19970218
                                           DE 97-19751939
                                                            19971124
                                           WO 98-EP865
                                                            19980216
OTHER SOURCE(S):
                         MARPAT 129:216617
ABSTRACT:
Ra-A-Het-B-Ar-E [A = CO, SO2; B = CH2CH2, OCH2, SCH2, SOCH2, SO2CH2, NR1CH2;
R1
= H, alkyl; E = cyano, RbNHC(:NH); Rb = H, OH, alkyl, group cleavable in vivo;
Ar = (substituted) phenylene, naphthylene, thienylene, thiazolylene,
pyridinylene, pyrimidinylene, pyrazinylene, pyridazinylene; Het = specified
bicyclic heterocyclyl; Ra = (substituted) alkyl, amino] were prepd. Thus,
1-methyl-2-[N-(4-amidinophenyl)aminomethyl]benzimidazol-5-ylcarboxylic acid
N-(2-pyridyl)-N-(2-carboxyethyl)amide (prepn. given) gave a thrombin time
ED200
of 0.03 .mu.M.
     211914-41-9P 211914-42-0P 211914-57-7P
TT
     211915-08-1P 211915-09-2P 211915-10-5P
     211915-11-6P
     RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); USES (Uses)
        (prepn. of amidinophenylethylbenzimidazolylcarboxamides and related
        compds. as thrombin inhibitors)
RN
     211914-41-9 CAPLUS
     Glycine, N-[[2-[[[4-(aminoiminomethyl)phenyl]amino]methyl]-1-methyl-1H-
CN
     benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, ethyl ester, dihydrochloride
            (CA INDEX NAME)
/ Structure 3 in file .gra /
     211914-42-0 CAPLUS
RN
CN
     Glycine, N-[[2-[[[4-(aminoiminomethyl)phenyl]amino]methyl]-1-methyl-1H-
     benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, monohydrochloride (9CI) (CA
     INDEX NAME)
/ Structure 4 in file .gra /
RN
     211914-57-7 CAPLUS
     Glycine, N-[[2-[[[4-(aminoiminomethyl)phenyl]amino]methyl]-1-methyl-1H-
CN
     benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, methyl ester, dihydrochloride
           (CA INDEX NAME)
     (9CI)
```

```
/ Structure 5 in file .gra /
           211915-08-1 CAPLUS
RN
CN
           Glycine,
N-[[2-[[[4-[imino[[[2-(methylsulfonyl)ethoxy]carbonyl]amino]methy]] + [[2-[[[4-[imino[[[2-(methylsulfonyl]ethoxy]carbonyl]amino]methy]] + [[2-[[[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy]ethoxy]] + [[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy]ethoxy]] + [[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy]ethoxy]] + [[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy] + [[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy[[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy]ethoxy[[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy]ethoxy[[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy[[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy]ethoxy[[4-[imino[[[2-(methylsulfonyl]ethoxy]ethoxy[[4-[[imino[[2-(methylsulfonyl]ethoxy]ethoxy[[4-[[imino[[2-(methylsulfonyl]ethoxy]ethoxy[[4-[[imino[[2-(methylsulfonyl]ethoxy[[4-[[imino[[2-(imino[[2-(methylsulfonyl]ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethox]ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[ethoxy[eth
            l]phenyl]amino]methyl]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-
           pyridinyl-, ethyl ester (9CI) (CA INDEX NAME)
/ Structure 6 in file .gra /
/ Structure 7 in file .gra /
RN
           211915-09-2 CAPLUS
CN
           Glycine,
N-[[2-[[[4-[[[(cyclohexyloxy)carbonyl]amino]iminomethyl]phenyl]am
            ino]methyl]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-,
methyl
            ester (9CI) (CA INDEX NAME)
/ Structure 8 in file .gra /
           211915-10-5 CAPLUS
RN
CN
            Glycine,
N-[[2-[[[4-[imino[(methoxycarbonyl)amino]methyl]phenyl]amino]meth
           yl]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, ethyl ester
            (9CI) (CA INDEX NAME)
/ Structure 9 in file .gra /
           211915-11-6 CAPLUS
CN
           Glycine,
N-[[2-[[[4-[[(ethoxycarbonyl)amino]iminomethyl]phenyl]amino]methy
            l]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, methyl ester
            (9CI) (CA INDEX NAME)
/ Structure 10 in file .gra /
IT
           211916-38-0
            RL: RCT (Reactant)
                   (prepn. of amidinophenylethylbenzimidazolylcarboxamides and related
                   compds. as thrombin inhibitors)
RN
            211916-38-0 CAPLUS
            Glycine, N-[[2-[[(4-cyanophenyl)amino]methyl]-1-methyl-1H-benzimidazol-5-
CN
            yl]carbonyl]-N-2-pyridinyl-, methyl ester (9CI) (CA INDEX NAME)
/ Structure 11 in file .gra /
IT
           211915-82-1P
           RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
                   (prepn. of amidinophenylethylbenzimidazolylcarboxamides and related
                  compds. as thrombin inhibitors)
RN
           211915-82-1 CAPLUS
```

Glycine, N-[[2-[[(4-cyanophenyl)amino]methyl]-1-methyl-1H-benzimidazol-5yl]carbonyl]-N-2-pyridinyl-, ethyl ester (9CI) (CA INDEX NAME) / Structure 12 in file .gra / L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 1999 ACS 1998:558825 CAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 129:189325 Preparation of 2-(amidinoanilinomethyl)benzimidazole-5carboxamides and analogs as antithrombotics Hauel, Norbert; Ries, Uwe; Priepke, Henning; Wienen, INVENTOR(S): Wolfgang; Stassen, Jean Marie PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma K.-G., Germany Ger. Offen., 62 pp. SOURCE: CODEN: GWXXBX DOCUMENT TYPE: Patent LANGUAGE: German FAMILY ACC. NUM. COUNT: PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE \_\_\_\_\_ DE 97-19706229 19970218 DE 19706229 A119980820 WO 9837075 A119980827 WO 98-EP865 19980216 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG AU 98-63991 AU 9863991 A1 19980909 19980216 PRIORITY APPLN. INFO .: DE 97-19706229 19970218 DE 97-19751939 19971124 WO 98-EP865 19980216 OTHER SOURCE(S): MARPAT 129:189325 GRAPHIC IMAGE: / Structure 13 in file .gra / ABSTRACT: RaAHetBArE [I; A = CO or SO2; B = ZCH2 or CH2Z; E = cyano or C(:NH)NHRb; Ar =

RaAHetBArE [I; A = CO or SO2; B = ZCH2 or CH2Z; E = cyano or C(:NH)NHRb; Ar = (un)substituted phenylene or -naphthylene; Het = e.g., heteroarylene residue II; Ra = (cyclo)alkyl, (di)(alkyl)amino, etc.; Rb = H, OH, alkyl, etc.; X = N or (alkyl-substituted) CH; Y = O, S, (alkyl)imino, etc.; Z = CH2, O, SO0-2] were prepd. Thus, PhNHCH2CH2CO2Et was amidated by 4-aminomethyl-3-nitrobenzoyl chloride and the reduced product cyclocondensed with 4-(NC)C6H4NHCH2CO2H to give, after hydrolysis and sapon., title compd. III. Data for biol. activity

IT 211914-41-9P 211914-42-0P 211914-57-7P 211915-08-1P 211915-09-2P 211915-10-5P

of I were given.

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211915-11-6P 211915-49-0P
     RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); USES (Uses)
        (prepn. of 2-(amidinoanilinomethyl)benzimidazole-5-carboxamides and
        analogs as antithrombotics)
RN
     211914-41-9 CAPLUS
     Glycine, N-[[2-[[[4-(aminoiminomethyl)phenyl]amino]methyl]-1-methyl-1H-
CN
     benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, ethyl ester, dihydrochloride
           (CA INDEX NAME)
/ Structure 14 in file .gra /
     211914-42-0 CAPLUS
RN
     Glycine, N-[[2-[[[4-(aminoiminomethyl)phenyl]amino]methyl]-1-methyl-1H-
CN
     benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, monohydrochloride (9CI) (CA
     INDEX NAME)
/ Structure 15 in file .gra /
RN
     211914-57-7 CAPLUS
CN
     Glycine, N-[[2-[[[4-(aminoiminomethyl)phenyl]amino]methyl]-1-methyl-1H-
     benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, methyl ester, dihydrochloride
           (CA INDEX NAME)
/ Structure 16 in file .gra /
RN
     211915-08-1 CAPLUS
CN
     Glycine,
N-[[2-[[[4-[imino[[[2-(methylsulfonyl)ethoxy]carbonyl]amino]methy
     l]phenyl]amino]methyl]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-
     pyridinyl-, ethyl ester (9CI) (CA INDEX NAME)
/ Structure 17 in file .gra /
/ Structure 18 in file .gra /
RN
     211915-09-2 CAPLUS
     Glycine,
CN
N-[[2-[[[4-[[[(cyclohexyloxy)carbonyl]amino]iminomethyl]phenyl]am
     ino]methyl]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-,
methyl
     ester (9CI) (CA INDEX NAME)
/ Structure 19 in file .gra /
     211915-10-5 CAPLUS
RN
CN
     Glycine,
N-[[2-[[[4-[imino[(methoxycarbonyl)amino]methyl]phenyl]amino]meth
     yl]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, ethyl ester
     (9CI) (CA INDEX NAME)
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/ Structure 20 in file .gra /
     211915-11-6 CAPLUS
CN
     Glycine,
N-[[2-[[[4-[[(ethoxycarbonyl)amino]iminomethyl]phenyl]amino]methy
     1]-1-methyl-1H-benzimidazol-5-yl]carbonyl]-N-2-pyridinyl-, methyl ester
     (9CI) (CA INDEX NAME)
/ Structure 21 in file .gra /
RN
     211915-49-0 CAPLUS
     Glycine, N-[[2-[[[4-(aminoiminomethyl)phenyl]amino]methyl]-1-methyl-1H-
     benzimidazol-5-yl]carbonyl]-N-2-pyridinyl- (9CI) (CA INDEX NAME)
/ Structure 22 in file .gra /
IT
     211916-38-0
     RL: RCT (Reactant)
        (prepn. of 2-(amidinoanilinomethyl)benzimidazole-5-carboxamides and
        analogs as antithrombotics)
RN
     211916-38-0 CAPLUS
CN
     Glycine, N-[[2-[[(4-cyanophenyl)amino]methyl]-1-methyl-1H-benzimidazol-5-
     yl]carbonyl]-N-2-pyridinyl-, methyl ester (9CI) (CA INDEX NAME)
/ Structure 23 in file .gra /
ΙT
     211915-82-1P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of 2-(amidinoanilinomethyl)benzimidazole-5-carboxamides and
        analogs as antithrombotics)
RN
     211915-82-1 CAPLUS
CN
     Glycine, N-[[2-[[(4-cyanophenyl)amino]methyl]-1-methyl-1H-benzimidazol-5-
     yl]carbonyl]-N-2-pyridinyl-, ethyl ester (9CI) (CA INDEX NAME)
/ Structure 24 in file .gra /
=> log h
COST IN U.S. DOLLARS
                                                 SINCE FILE
                                                                 TOTAL
                                                      ENTRY
                                                                SESSION
FULL ESTIMATED COST
                                                       8.72
                                                                551.91
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
                                                 SINCE FILE
                                                                 TOTAL
                                                      ENTRY
                                                                SESSION
CA SUBSCRIBER PRICE
                                                      -1.07
                                                                 -1.61
SESSION WILL BE HELD FOR 60 MINUTES
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STN INTERNATIONAL SESSION SUSPENDED AT 17:08:04 ON 10 JUL 1999